P1 1177310

THE UNITED STATES OF AMERICA

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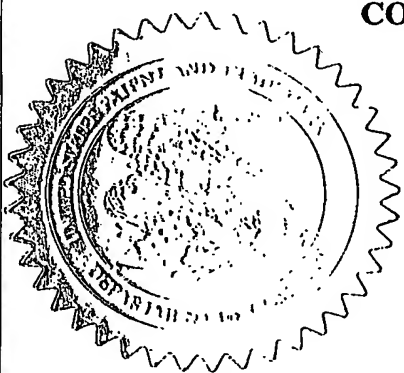
June 01, 2004

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APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A
FILING DATE.

APPLICATION NUMBER: *60/458,491*
FILING DATE: *March 28, 2003*
RELATED PCT APPLICATION NUMBER: *PCT/US04/09610*

By Authority of the
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3—31 60958491.032803A/8000

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PROVISIONAL APPLICATION COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION under 37 CFR 1.53(c).

DOCKET NUMBER: B01075.70038
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INVENTOR(S)/APPLICANT(S)

LAST NAME	FIRST NAME	MIDDLE INITIAL	RESIDENCE (CITY AND EITHER STATE OR FOREIGN COUNTRY)
Stevens-Wright	Debbie		North Andover, MA
Amara	Ryan		Stoneham, MA
Brown	Erik		Allston, MA
MacAdam	David		Mullbury, MA

[ ] *Additional inventors are being named on the separately numbered sheets attached hereto.*

TITLE OF THE INVENTION (280 characters max)

SHAPE SHIFTING ELECTRODE GEOMETRY FOR ELECTROPHYSIOLOGY CATHETERS

CORRESPONDENCE ADDRESS

CUSTOMER NUMBER: 23628

ENCLOSED APPLICATION PARTS (check all that apply)

[X] Specification - Number of Pages = 2

[ ] Drawing(s) - Number of Sheets

[ ] Application Data Sheet, See 37 CFR 1.76

[X] Return receipt postcard

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.
[X] No
[ ] Yes, the name of the U.S., Government Agency and the Government Contract Number are:

[ ] Other:

METHOD OF PAYMENT (check all that apply)

[X] A check is enclosed to cover the Provisional Filing Fees.

[ ] The Commissioner is hereby authorized to charge any additional fees or credit overpayment to Deposit Account 23/2825. A duplicate of this sheet is enclosed.

[ ] Small Entity Status is claimed.

PROVISIONAL FILING FEE AMOUNT $ 160.00

Respectfully submitted,

March 28, 2003
Date

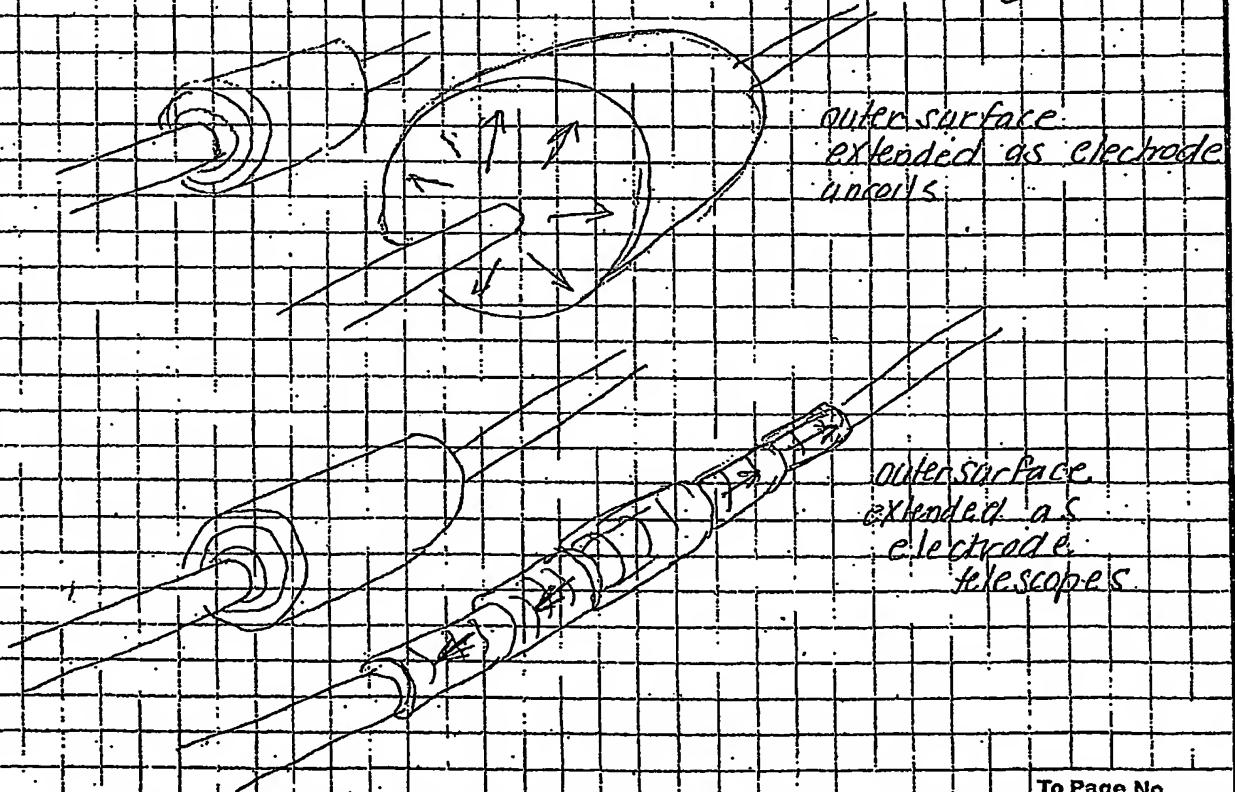James H. Morris, Reg. No. 34,681
Telephone No.: 617-720-3500

TITLE Shape Shifting Electrode Geometry

From Page No.___

Morgan Analysis study showed that extending the surface of the electrode produces a larger lesion. The larger geometry pushes the point that the potential begins to drop off further into the domain. The reach of the potential field is larger for electrodes having an outer surface that extended out further into the domain, extending toward the boundaries of the domain.

For clinical reasons, it is undesirable to have an electrode that is excessively large. One concept would be to have an electrode that started off with a compact geometry when moving through the vasculature. At the site of energy application the outer surface of the electrode could be extended to improve the lesion depth as necessary.
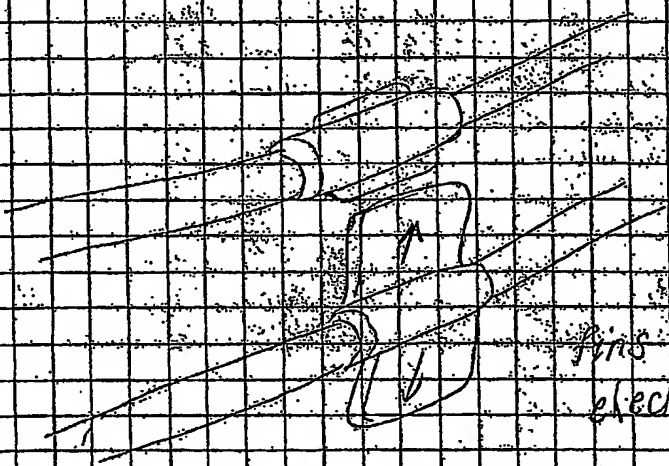
outer surface
extended as electrode
uncoils

outer surface
extended as
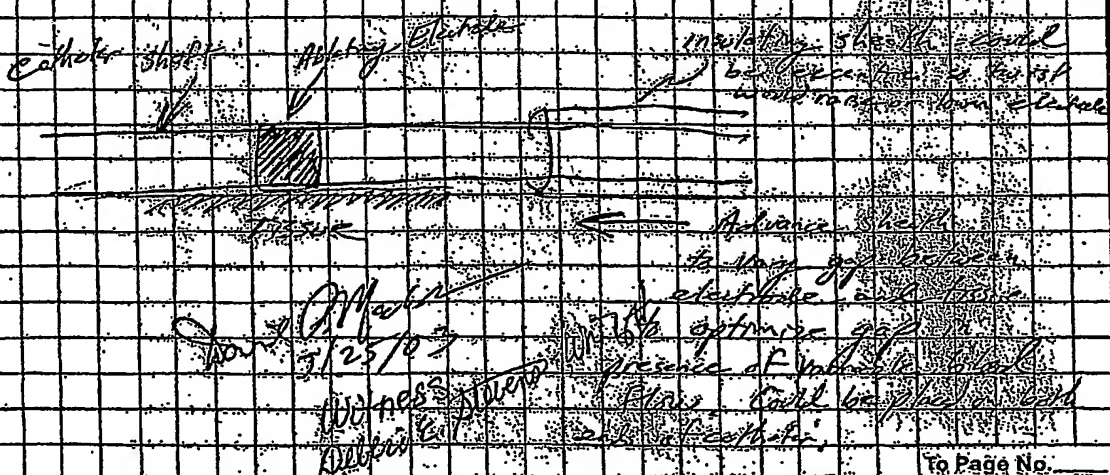electrode
telescopes

To Page No.___

TITLE *shape-shifting geometry*

From Page No. _____

fins extend out from
electrode surface

extending the reach
of the field

thus increasing the
lesion depth

cathode shaft   Ablating Electrode   insulating sheath could
                                               be increased to expose
                                               more or less electrode

tissue   ← Advance sheath
                            to change gap between
                            electrode and tissue

                         with optimum gap in
                         presence of induced field
                         this could be greatest
                         lesion depth

Witness _____
Approved _____   To Page No. _____

5/25/0?